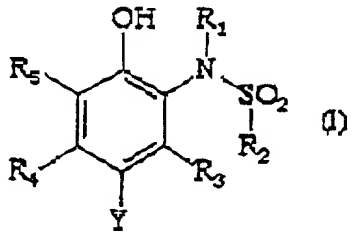
CLAIMS

1. Composition for the oxidation dyeing of keratinous fibres, characterized in that it comprises, in a medium appropriate for the dyeing of the said fibres:
   - at least one oxidation base;
   - and at least one coupler chosen from the compounds of following formula (I) and/or their addition salts



(I)

with an acid:

in which:

- R_1 represents a hydrogen atom or a linear or branched radical comprising from 1 to 15 carbon atoms (it being possible for the branching or branchings to form one or more carbonaceous rings comprising from 3 to 7 ring members) which can comprise one or more double bonds and/or one or more triple bonds (the said double bonds optionally resulting in aromatic groups) and one or more carbon atoms of which can be replaced by an oxygen, nitrogen or sulphur atom or by an SO_2 group and the carbon atoms of which can, independently of one another, be substituted by one or more halogen atoms, the said R_1 radical comprising neither peroxide bonds nor diazo, nitro and nitroso radicals;

- R_2 represents a hydrogen atom or a linear or branched

radical comprising from 1 to 20 carbon atoms (it being possible for the branching or branchings to form one or more carbonaceous rings comprising from 3 to 7 ring members) which can comprise one or more double bonds and/or one or more triple bonds (the said double bonds optionally resulting in aromatic groups) and one or more carbon atoms of which can be replaced by an oxygen, nitrogen or sulphur atom or by an SO_2 group and the carbon atoms of which can, independently of one another, be substituted by one or more halogen atoms, the said R_2 radical comprising neither peroxide bonds nor diazo, nitro and nitroso radicals;

- R_3, R_4 and R_5, which are identical or different, represent a hydrogen or halogen atom or a linear or branched radical comprising from 1 to 20 carbon atoms (it then being possible for the branching or branchings to form one or more rings comprising from 3 to 7 ring members) which can comprise one or more double bonds and/or one or more triple bonds (the said double bonds optionally resulting in aromatic groups) and one or more carbon atoms of which can be replaced by an oxygen, nitrogen or sulphur atom or by an SO_2 group and the carbon atoms of which can, independently of one another, be substituted by one or more halogen atoms, the said radical comprising neither peroxide bonds nor diazo, nitro and nitroso radicals and it being understood that R_5 cannot represent a hydroxyl, thio or amino radical and it being understood that the R_3, R_4 and R_5 radicals cannot be connected to the benzene ring of the formula (I) via an -NH-NH- bond;

• Y represents a hydrogen or halogen atom; an $-OR_6$, $-SR_6$ or $-NH-SO_2R_6$ group in which R_6 represents a linear or branched C_1-C_6 alkyl radical (it then being possible for the branching or branchings to form one or more rings comprising from 3 to 6 ring members), optionally substituted by one or more radicals chosen from the group: halogen, hydroxyl, C_1-C_4 alkoxy, amino or C_1-C_4 aminoalkyl; a phenyl radical, optionally substituted by one or two radicals chosen from the group: C_1-C_4 alkyl, trifluoromethyl, carboxyl, C_1-C_4 alkoxycarbonyl, halogen, hydroxyl, C_1-C_4 alkoxy, amino or C_1-C_4 aminoalkyl; or a benzyl radical.

2. Composition according to Claim 1, characterized in that, in the said compounds of formula (I), R_1 denotes a hydrogen atom; an A_1 group composed of a linear or branched C_1-C_8 alkyl radical which can carry one or two double bonds or one triple bond, which may or may not be substituted by a group chosen from an A_2, A_4 and A_5 group as defined below, which may or may not be substituted by one or two identical or different groups chosen from the N-(C_1-C_3)alkylamino, N-(C_1-C_3)-alkyl-N-(C_1-C_3)alkylamino, (C_1-C_6)alkoxy, oxo, alkoxycarbonyl, acyloxy, amido, acylamino, ureyl, sulphoxy, sulphonyl, sulphonamido, sulphonylamino, bromo, cyano or carboxyl groups, and which may or may not be substituted by one or more hydroxyl, fluoro or chloro groups; an A_2 group composed of an aromatic group of phenyl or naphthyl type which may or may not be substituted by one to three identical or different groups chosen from the methyl, trifluoromethyl, ethyl, isopropyl, butyl, pentyl, fluoro, chloro, bromo,

methoxy, trifluoromethoxy, ethoxy, propyloxy, acetyloxy, acetyl and cyano groups; an A_3 group composed of heteroaromatic groups chosen from the furanyl, thiophenyl, pyrrolyl, imidazolyl, thiazolyl, oxazolyl, 1,2,3-triazolyl, 1,2,4-triazolyl, isoxazolyl, isothiazolyl, pyrazolyl, pyrazolotriazolyl, pyrazoloimidazolyl, pyrrolotriazolyl, pyrazolopyrimidyl, pyrazolopyridyl, pyridyl, pyrimidyl, benzimidazolyl, benzoxazolyl, benzothiazolyl, indolyl, indolidinyl, isoindolyl, indazolyl, benzotriazolyl, quinolinyl, benzimidazolyl or benzopyrimidyl groups, optionally substituted by 1 to 3 radicals chosen from linear or branched C_1-C_4 alkyl, C_1-C_4 (poly)hydroxyalkyl, carboxyl, alkoxycarbonyl, halogen, amido, amino or hydroxyl; an A_4 group composed of a C_3-C_7 cycloalkyl radical or a norbornanyl radical optionally carrying a double bond and optionally substituted by 1 or 2 radicals defined by linear or branched C_1-C_4 alkyl, C_1-C_4 (poly)hydroxyalkyl, carboxyl, alkoxycarbonyl, halogen, amido, amino or hydroxyl; or an A_5 group composed of a heterocycle chosen from the dihydrofuranyl, tetrahydrofuranyl, butyrolactoneyl, dihydrothiophenyl, tetrahydrothiophenyl, tetrahydrothiophenoneyl, iminothiolanyl, dihydropyrrolyl, pyrrolidinyl, pyrrolidinoneyl, imidazolidinoneyl, imidazolidinethioneyl, oxazolidinyl, oxazolidinoneyl, oxazolanethioneyl, thiazolidinyl, isothiazoloneyl, mercaptothiazolinyl, pyrazolidinoneyl, iminothiolanyl, dioxolanyl, pentalactoneyl, dioxanyl, dihydropyridinyl, piperidinyl, pentalactamyl, morpholinyl, pyrazoli(di)nyl, pyrimi(di)nyl, pyrazinyl, piperazinyl and azepinyl rings.

3. Composition according to Claim 2, characterized in that R_1 represents a hydrogen atom, a methyl, ethyl, isopropyl, allyl, phenyl, benzyl, fluorobenzyl, hydroxybenzyl, difluorobenzyl, trifluorobenzyl, chlorobenzyl, bromobenzyl, methoxybenzyl, dimethoxybenzyl, (trifluoromethoxy)benzyl, 3,4-methylenedioxybenzyl, 6-chloropiperonyl, 4-methylthiobenzyl, 4-methylsulphonylbenzyl, 4-acetylaminobenzyl, 4-carboxybenzyl, 1-naphthomethyl or 2-naphthomethyl radical; or a 2-hydroxyethyl, 2-methoxyethyl or 2-ethoxyethyl group.

4. Composition according to any one of Claims 1 to 3, characterized in that, in the said compounds of formula (I), R_2 denotes a hydrogen atom; an amino group; or an A_1, A_2, A_3, A_4 or A_5 group as defined in Claim 2, the said groups optionally being separated from the sulphur, situated in the 8 position, of the sulphonamide functional group of the said compound of formula (I) by an -NH- or -N-(C_1-C_3)alkyl- group.

5. Composition according to Claim 4, characterized in that R_2 denotes a radical chosen from the group (G1) consisting of a methyl, trifluoromethyl, ethyl, 2-chloroethyl, propyl, 3-chloropropyl, isopropyl, butyl, phenyl, ethoxy, amino and dimethylamino radical.

6. Composition according to any one of Claims 1 to 5, characterized in that, in the said compounds of formula (I), R_3 and R_4, which are identical or

different, denote a hydrogen or halogen atom; a hydroxyl or amino group; an A_1, A_4 or A_5 group as defined in Claim 2; or an A_1, A_2, A_3, A_4 or A_5 group as defined in Claim 2 which is separated from the phenol nucleus of the said formula (I) by an oxygen atom or by an -NH-, -N-(C_1-C_3)alkyl-, -O(CO)-, -NH(CO)-, -N-(C_1-C_3)alkyl(CO)-, -NH[C=NH]-, -NH(CO)NH-, -NH(CO)N-(C_1-C_3)alkyl-, -NH(CO)O-, -$NHSO_2$-, -$NHSO_2NH$- or -$NHSO_2N$-(C_1-C_3)alkyl- group.

7. Composition according to Claim 6, characterized in that R_3 represents a hydrogen or chlorine atom; a methyl, hydroxymethyl, methoxymethyl, 1-hydroxyethyl, aminomethyl or methylaminomethyl radical; a hydroxyl, methoxy or acetoxy radical; an amino, methylamino or 2-hydroxyethylamino radical; an -NH(CO)R_7 group in which R_7 represents a radical chosen from the group (G2) consisting of the methyl, ethyl, propyl, isopropyl, butyl, isobutyl, tert-butyl, pentyl, isopentyl, neopentyl, hexyl; cyclopropyl, cyclobutyl, cyclopentyl, cyclopentylmethyl, 3-cyclopentylpropyl, cyclohexyl, 2-cyclohexylethyl, norbornan-2-yl, vinyl, 1-methylvinyl, 2-methylvinyl, 2,2-dimethylvinyl, allyl, 3-butenyl; phenyl, methylphenyl, dimethylphenyl, 2,4,6-trimethylphenyl, 4-ethylphenyl, (trifluoromethyl)phenyl, hydroxyphenyl, methoxyphenyl, ethoxyphenyl, acetoxyphenyl, (trifluoromethoxy)phenyl, aminophenyl, 4-dimethylaminophenyl, fluorophenyl, difluorophenyl, fluoro(trifluoromethyl)phenyl, chlorophenyl, dichlorophenyl, bromophenyl, naphth-1-yl, naphth-2-yl, (2-methoxy)naphth-1-yl, benzyl,

4'-methoxybenzyl, 2',5'-dimethoxybenzyl, 3',4'-dimethoxybenzyl, 4'-fluorobenzyl, 4'-chlorobenzyl, phenethyl, 2-phenylvinyl, (1-naphthyl)methyl, (2-naphthyl)methyl; tetrahydrofuran-2-yl, furan-2-yl, 5-methyl-2-(trifluoromethyl)furan-3-yl, 2-methyl-5-phenylfuran-3-yl, thiophen-2-yl, (thiophen-2-yl)-methyl, 3-chlorothiophen-2-yl, 2,5-dichlorothiophen-3-yl, benzothiophen-2-yl, 3-chlorobenzothiophen-2-yl, isoxazol-5-yl, 5-methylisoxazol-3-yl, 3,5-dimethyl-isoxazol-4-yl, 1,3-dimethylpyrazol-5-yl, 1-ethyl-3-methylpyrazol-5-yl, 1-tert-butyl-3-methylpyrazol-5-yl, 3-tert-butyl-1-methylpyrazol-5-yl, 4-bromo-1-ethyl-3-methylpyrazol-5-yl, indol-3-ylcarboxyl, pyridinyl, chloropyridinyl, dichloropyridinyl, 5-(bromo)pyridin-3-yl, piperazin-2-yl, quinoxal-2-yl; fluoromethyl, difluoromethyl, trifluoromethyl, 1,1,2,2-tetrafluoroethyl, pentafluoroethyl, heptafluoropropyl, 1,1,2,2,3,3,4,4-octafluorobutyl, nonafluorobutyl, chloromethyl, chloroethyl, 1,1-dimethyl-2-chloroethyl, 1,2-dichloroethyl, 1-chloropropyl, 3-chloropropyl, 4-chlorobutyl, hydroxymethyl, methoxymethyl, phenoxymethyl, (4-chlorophenoxy)methyl, benzyloxymethyl, acetoxymethyl, 1,2-dihydroxyethyl, 1-phenoxyethyl, 1-acetoxyethyl, 2-(2-carboxyethoxy)-ethyl, 1-phenoxyethyl, 1-acetoxyethyl, methoxycarbonyl, ethoxycarbonyl, (methoxycarbonyl)methyl, 2-carboxyethyl, 2-(methoxycarbonyl)ethyl, 2-carboxycyclopropyl, 2-carboxycyclohexane; methoxy, ethoxy, propoxy, isopropoxy, butoxy, isobutoxy, pentoxy, neopentoxy, hexyloxy, cyclopentyloxy, cyclohexyloxy, vinyloxy, allyloxy, propargyloxy, chloromethoxy, 1-chloroethoxy, 2-methoxyethoxy, 4-chlorobutoxy,

phenoxy, 4-methylphenoxy, 4-fluorophenoxy, 4-bromophenoxy, 4-chlorophenoxy, 4-methoxyphenoxy, naphth-2-yloxy, benzyloxy; amino, methylamino, ethylamino, propylamino, isopropylamino, butylamino, cyclohexylamino, allylamino, 2-chloroethylamino, 3-chloropropylamino, carboxymethylamino, phenylamino, fluorophenylamino, (trifluoromethyl)phenylamino, chlorophenylamino, bromophenylamino, 4-acetylphenylamino, methoxyphenylamino, (trifluoromethoxy)phenylamino, naphth-1-ylamino, benzylamino, phenethylamino, pyrid-3-ylamino, dimethylamino, 1-pyrrolidinyl and 4-morpholinyl radicals; or an $-NHSO_2R_8$ group in which R_8 represents a radical chosen from the group (G1) as defined in Claim 5.

8. Composition according to Claim 6, characterized in that R_4 represents a hydrogen or chlorine atom; a methyl, ethyl, hydroxymethyl, methoxymethyl, aminomethyl or methylaminomethyl radical; a hydroxyl, methoxy, acetoxy, amino, methylamino, N-piperidino or N-morpholino group; an $-NH(CO)R_{10}$ group in which R_{10} represents one of the radicals listed in the group (G2) as defined in Claim 7; or an $-NHSO_2R_{11}$ group in which R_{11} represents one of the radicals listed in the group (G1) as defined in Claim 5.

9. Composition according to any one of Claims 1 to 8, characterized in that, in the said compounds of formula (I), R_5 denotes a hydrogen or halogen atom; an A_1, A_4 or A_5 group as defined in Claim 2; or an A_1, A_2, A_3, A_4 or A_5 group as defined in Claim 2 which is separated from the phenyl nucleus of the compounds of

formula (I) by an oxygen or sulphur atom or by an -NH-, -N-(C_1-C_3)alkyl-, -NH(CO)-, -N-(C_1-C_3)alkyl(CO)-, -NH[C=NH]-, -NH(CO)NH-, -NH(CO)N-(C_1-C_3)alkyl- or -NH(CO)O- group.

10. Composition according to Claim 9, characterized in that R_5 represents a hydrogen, chlorine, fluorine or bromine atom; a methyl, trifluoromethyl, allyl, hydroxymethyl, methoxymethyl, 1-hydroxyethyl, aminomethyl, methylaminomethyl, methoxy, acetoxy or methylamino radical; an -NH(CO)R_{13} group in which R_{13} represents one of the radicals listed in the group (G2) as defined in Claim 7; or an -NHSO$_2$$R_{14}$ group in which R_{14} represents one of the radicals listed in the group (G1) as defined in Claim 5.

11. Composition according to any one of Claims 1 to 10, characterized in that, in the said compounds of formula (I), Y denotes a hydrogen, chlorine, fluorine or bromine atom; a methoxy, ethoxy, propoxy, benzyloxy or phenoxy group; or an -$OCH_2CH_2OCH_3$, -$OCH_2CH_2OCH_3$, -$OCH_2CH_2N(CH_3)_2$, -$OCH_2(CO)OH$, -$OCH_2(CO)OCH_3$, -$OCH_2(CO)OC_2H_5$, -$SCH_2CH_2CO_2H$ or -$NHSO_2CH_3$ group.

12. Composition according to any one of Claims 1 to 11, characterized in that the compounds of formula (I) are chosen from those in which:

i) - R_1 represents a hydrogen atom;

- R_2 represents a methyl, ethyl, phenyl or dimethylamino radical;

- R_3 represents a hydroxyl, amino or methylamino radical; an $-NH(CO)R_{16}$ group in which R_{16} represents a radical chosen from the group (G4) consisting of the methyl, methoxymethyl, 2-carboxyethyl, methoxy, amino, ethylamino and 1-pyrrolidinyl radicals; methanesulphonylamino, ethanesulphonylamino and dimethylaminosulphonylamino;
- R_4 represents a hydrogen or chlorine atom or a methyl group;
- R_5 represents a hydrogen, chlorine or fluorine atom or a methyl group;
- Y represents a hydrogen or chlorine atom or a methoxy or $-OCH_2(CO)OCH_3$ group;

ii) - R_1 represents a hydrogen atom;
- R_2 represents a methyl, ethyl, phenyl or dimethylamino radical;
- R_3 represents a hydrogen atom or a methyl radical;
- R_4 represents a hydroxyl, amino, methylamino or $-NH(CO)R_{17}$ group in which R_{17} represents one of the radicals listed in the group (G4) defined above; or a methanesulphonylamino, ethanesulphonylamino or dimethylaminosulphonylamino group;
- R_5 represents a hydrogen, chlorine or fluorine atom or a methyl, methoxy or methylamino group;
- Y represents a hydrogen or chlorine atom or a methoxy or $-OCH_2(CO)OCH_3$ group;

iii) - R_1 represents a hydrogen atom;
- R_2 represents a methyl, ethyl, phenyl or dimethylamino radical;
- R_3 represents a hydrogen atom or a methyl radical;

- R_4 represents a hydrogen or chlorine atom or a methyl, methoxy or methylamino radical;
- R_5 represents a methylamino or $-NH(CO)R_{18}$ group in which R_{18} represents one of the radicals listed in the group (G4) defined above; or a methanesulphonylamino, ethanesulphonylamino or dimethylaminosulphonylamino group;
- Y represents a hydrogen or chlorine atom or a methoxy or $-OCH_2(CO)OCH_3$ group;

iv)
- R_1 represents a hydrogen atom;
- R_2 represents a methyl, ethyl, phenyl or dimethylamino radical;
- R_3 represents a hydrogen atom or a methyl radical;
- R_4 represents a hydrogen or chlorine atom or a methyl radical;
- R_5 represents a hydrogen, chlorine or fluorine atom or a methyl radical;
- Y represents a hydrogen or chlorine atom or a methoxy or $-OCH_2(CO)OCH_3$ group.

13. Composition according to any one of Claims 1 to 12, characterized in that the compounds of formula (I) are chosen from:
- N-(2-hydroxyphenyl)methanesulphonamide;
- N-(2-hydroxy-4-methylphenyl)methanesulphonamide;
- N-(2-hydroxy-4-aminophenyl)methanesulphonamide;
- N-(2-hydroxy-4-(acetylamino)phenyl)methanesulphonamide;
- N-(2-hydroxy-4-(methoxycarbonylamino)phenyl)-methanesulphonamide;
- N-(2-hydroxy-5-chlorophenyl)methanesulphonamide;

- N-(2-hydroxy-4-methyl-5-chlorophenyl)methane-sulphonamide;
- N-(2-hydroxy-4-amino-5-chlorophenyl)methane-sulphonamide;
- N-(2-hydroxy-4-acetylamino-5-chlorophenyl)-methanesulphonamide;
- N-(2-hydroxy-4-methoxycarbonylamino-5-chloro-phenyl)methanesulphonamide;
- N-(2-hydroxy-5-methoxyphenyl)methanesulphonamide;
- N-(2-hydroxy-4-methyl-5-methoxyphenyl)methane-sulphonamide;
- N-(2-hydroxy-4-amino-5-methoxyphenyl)methane-sulphonamide;
- N-(2-hydroxy-4-acetylamino-5-methoxyphenyl)-methanesulphonamide;
- N-(2-hydroxy-4-methoxycarbonylamino-5-methoxy-phenyl)methanesulphonamide;
- N-(2-hydroxy-6-aminophenyl)methanesulphonamide;
- N-(2-hydroxy-6-(acetylamino)phenyl)methane-sulphonamide;
- N-(2-hydroxy-4,6-diaminophenyl)methanesulphonamide;
- N-(2-hydroxy-4-acetylamino-6-aminophenyl)methane-sulphonamide;
- N-(2-hydroxy-3,5-dichloro-4-methylphenyl)methane-sulphonamide;
- N-(2-hydroxy-3,5-dichloro-4-aminophenyl)methane-sulphonamide;
- N-(2-hydroxy-3,5-dichloro-4-(acetylamino)phenyl)-methanesulphonamide;
- N-(2-hydroxy-3,5-dichloro-4-(methoxycarbonyl-amino)phenyl)methanesulphonamide;
- N-(2-hydroxy-3-(methanesulphonylamino)phenyl)-

methanesulphonamide;

- N-(2-hydroxyphenyl)benzenesulphonamide;
- N-(2-hydroxy-4-methylphenyl)benzenesulphonamide;
- N-(2-hydroxy-4-aminophenyl)benzenesulphonamide;
- N-(2-hydroxy-4-(acetylamino)phenyl)benzene-sulphonamide;
- N-(2-hydroxy-4-(methoxycarbonylamino)phenyl)-benzenesulphonamide;
- N-(2-hydroxy-5-chlorophenyl)benzenesulphonamide;
- N-(2-hydroxy-4-methyl-5-chlorophenyl)benzene-sulphonamide;
- N-(2-hydroxy-4-amino-5-chlorophenyl)benzene-sulphonamide;
- N-(2-hydroxy-4-acetylamino-5-chlorophenyl)-benzenesulphonamide;
- N-(2-hydroxy-4-methoxycarbonylamino-5-chloro-phenyl)benzenesulphonamide;
- N-(2-hydroxy-5-methoxyphenyl)benzenesulphonamide;
- N-(2-hydroxy-4-methyl-5-methoxyphenyl)benzene-sulphonamide;
- N-(2-hydroxy-4-amino-5-methoxyphenyl)benzene-sulphonamide;
- N-(2-hydroxy-4-acetylamino-5-methoxyphenyl)-benzenesulphonamide;
- N-(2-hydroxy-4-methoxycarbonylamino-5-methoxy-phenyl)benzenesulphonamide;
- N-(2-hydroxy-6-aminophenyl)benzenesulphonamide;
- N-(2-hydroxy-6-(acetylamino)phenyl)benzene-sulphonamide;
- N-(2-hydroxy-4,6-diaminophenyl)benzenesulphonamide;
- N-(2-hydroxy-4-acetylamino-6-aminophenyl)benzene-sulphonamide;

- N-(2-hydroxy-3,5-dichloro-4-methylphenyl)benzene-sulphonamide;
- N-(2-hydroxy-3,5-dichloro-4-aminophenyl)benzene-sulphonamide;
- N-(2-hydroxy-3,5-dichloro-4-(acetylamino)phenyl)-benzenesulphonamide;
- N-(2-hydroxy-3,5-dichloro-4-(methoxycarbonyl-amino)phenyl)benzenesulphonamide;
- N-(2-hydroxy-3-(benzenesulphonylamino)phenyl)-benzenesulphonamide;

and their addition salts with an acid.

14. Composition according to any one of Claims 1 to 13, characterized in that the compound or compounds of formula (I) and/or the addition salt or their addition salts with an acid preferably represent from 0.0005 to 12% by weight approximately of the total weight of the dyeing composition.

15. Composition according to any one of Claims 1 to 14, characterized in that the addition salts with an acid are chosen from hydrochlorides, hydrobromides, sulphates, citrates, succinates, tartrates, lactates and acetates.

16. Process for the dyeing of keratinous fibres and in particular of human keratinous fibres, such as the hair, characterized in that at least one dyeing composition as defined in one of Claims 1 to 15 is applied to the said fibres and in that the colour is developed at acidic, neutral or alkaline pH using an oxidizing agent which is added only at the time of

use to the dyeing composition or which is present in an oxidizing composition applied simultaneously or sequentially in a separate fashion.

17. Process according to Claim 16, characterized in that the oxidizing agent is chosen from hydrogen peroxide, urea hydrogen peroxide, alkali metal bromates, persalts and enzymes.

18. Process according to Claim 17, characterized in that the enzymes are chosen from peroxidases, laccases, tyrosinases and oxidoreductases.

19. Multi-compartment device or multi-compartment dyeing kit, a first compartment of which includes a dyeing composition as defined in any one of Claims 1 to 15 and a second compartment of which includes an oxidizing composition.